PROPOSED ACTION

IMPACTS ON NATURAL RESOURCES

Wildlife

This alternative proposes moderate new campground and dock construction (5-10 new facilities) and minor demolition of facilities (fewer than 5) that would temporarily disturb or permanently displace wildlife. The net loss of habitat would be minimal due to the rehabilitation of sites where facilities would be removed. Most new construction would be in previously disturbed areas that have had some degree of human use. Some increased use could occur that could cause more disturbance. Overall visitor use of the park would be monitored and managed, which would reduce wildlife disturbance compared to alternative A. (See discussion of the wildlife impacts in the "Impacts Common to the Proposed Action and Alternatives B, C, and E" section.)

Disturbance of waterfowl is most critical at nesting sites near the shoreline. This alternative establishes quiet/no-wake water zones in many areas, which affords more protection to sensitive waterfowl habitat than any of the alternatives except C. Removal of portions of the Chippewa trail would create an undisturbed area larger than existing conditions that would rarely be used by people and would probably be beneficial to wildlife.

Threatened and Endangered Species

Potential disturbance to threatened and endangered species from dispersal of visitation, increased use in particular areas, and introduction of use into new areas would be minimized by monitoring and managing visitation levels. (Also see discussion of the VERP process in the "Actions Common to the Proposed Action, Alternatives B, C, and E" section.) No additional impacts on bald eagles or peregrine falcons would be expected.

Designated Wilderness

Existing park activities will delay for the foreseeable future the conversion of five potential wilderness areas to wilderness. In this alternative conversion of two additional areas would be delayed in order to preserve cultural resources through adaptive use.

Geologic Processes

Removal of the Siskiwit dock and breakwater would permit natural shoreline processes to return, particularly the movement of sand and sediment along the shoreline in Siskiwit Bay.

Water Quality

Water quality impacts would be similar to Alternative A, with the following exceptions: Use limits and prohibition of personal watercraft in the park mean that emission of hydrocarbon compounds into park waters is not likely to increase much beyond current levels. The NPS's leadership role in use of non-polluting motorboat engines, education efforts about environmental and other benefits of nonpolluting engines, and increased availability of such engines could gradually result in a greater proportion of cleaner motorboat engines in the park. This would cause a concomitant decrease in hydrocarbon emissions into Lake Superior waters. (See also "Impacts Common to the Proposed Action, Alternatives B, C, and E").

IMPACTS ON CULTURAL RESOURCES

Archeological Resources

Short-term minor negative impacts on known or previously unknown archeological resources could be caused by construction associated with adaptive use of structures at Barnum, Wright, and Washington Islands; Crystal Cove, Fishermans Home, and up to six new

campgrounds and three new campsite areas. The long-term effect of establishing quiet/no-wake water zones in Lake Superior bays and harbors would be positive. Submerged and shoreline archeological resources would be protected from wake effect.

The removal of three docks and one breakwater, construction of five new docks, and relocation of one dock could result in short-term impacts on submerged and terrestrial archeological resources.

Historic Resources

Adaptive use of structures at Barnum Island, Washington Island, Fishermans Home, Crystal Cove, and Wright Island would help preserve them and associated features; however, there could be some loss of historic fabric through adaptive use. Development of campsites at these locations could slightly impact cultural landscapes, depending on the site, location, size, and use level of the campground.

IMPACTS ON VISITOR USE AND VISITOR EXPERIENCE

Scenic Quality

The amount of developed shoreline would increase slightly because of additional campgrounds; however, the three campgrounds where docks would be removed would appear more natural. Some increased visitor impacts would occur in areas of increased activity (such as Crystal Cove and Wright Island); however, monitoring and management of use levels would limit these impacts. Removal or remodeling of motel buildings at Rock Harbor and revegetating the disturbed areas would make the shoreline appear more natural.

Wilderness Experience and Noise

Overall visitor use would be monitored and managed, which would reduce overcrowding and associated noise and enhance wilderness experience for all park users. The numerous quiet/no-wake water zones would reduce noise from ferries, visitor boats, and NPS boats, thus enhancing wilderness experiences, particularly in the northeast portion of the park. Restrictions on use of generators and noise-producing electronic devices would also promote quiet.

Range of Uses

The current range of uses would continue to be accommodated. Some separation of motorized and nonmotorized uses would increase the potential for quality visitor experiences. Quiet/no-wake zones would slightly decrease speed of boat and ferry movement around the island.

Unavailability of funding for concessioner subsidies would probably result in higher costs to the consumer and might price some individuals out of the market. If the concession operation fails, people unable to visit the island without those services would be displaced.

Visitor Use Levels

Visitor use limits would be established.

Management action would be taken to prevent those limits from being exceeded. Some visitors may be unable to visit the island at a preferred time, or they may be unable to visit individual sites without adjusting their itineraries. If overnight accommodations cannot be sustained, some visitors could stop coming to the island.

Safety

With the removal of docks (at Siskiwit for example) some sites would be more isolated, and visitors would have to be more self-reliant.

IMPACTS ON THE SOCIOECONOMIC ENVIRONMENT

Facility removal and development in the park would result in money spent in the gateway communities for construction labor, management, and materials. Although this influx of federal spending would benefit a few individuals and firms, these benefits would be short-term, lasting only for the duration of the projects. The benefits would be spread over time as the work would be conducted in phases over several seasons, which would mitigate the overall impacts.

Activities in the gateway communities of Houghton and Copper Harbor, Michigan, and Grand Portage, Minnesota, would continue with business enterprises responding to market conditions and demand as warranted. If changes to the concessions at Rock Harbor resulted in fewer visitors traveling to the island from Copper Harbor and Grand Portage, those communities could be negatively affected. However, there are many other tourist attractions in the affected areas, and this disturbance of the tourism industry would be absorbed in due time with relatively small long-term negative impacts.

IMPACTS ON PARK OPERATIONS

With reduced and more sustainable systems at Rock Harbor, the maintenance and operational workload would be reduced.

Some increase in maintenance workload would be anticipated due to the construction of new campgrounds and other facilities, and maintenance in quiet/no-wake zones would be more time-consuming because of the reduced motorized access.

Monitoring and managing visitor use levels would increase the overall park operational workload.

CUMULATIVE IMPACTS

This alternative gives focus and emphasis to researching, monitoring, and preserving cultural resources. The knowledge gained and the facilities protected would complement the

efforts of historical, ethnic, and preservation groups and agencies throughout the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

This section is intended to describe the relationship of the short-term impacts of the actions proposed in this alternative to the longterm productivity of the human environment at Isle Royale. The proposed actions, such as removing or constructing docks, constructing campgrounds, removing trail sections, and modifying concession services, would require relatively minor disturbance of soils, vegetation, and habitat. Most work would be done in previously disturbed areas and mitigation measures would be used. The long-term effect on the natural environment would be minor in terms of habitat or resource loss but the effect on visitor experience would be great for decades to come. The potential for meeting all visitor expectations at Isle Royale would be greatly enhanced. Overall water and electricity use would be reduced because fewer services would be provided at Rock Harbor.

UNAVOIDABLE ADVERSE EFFECTS

The proposed action is not expected to negatively affect overall conditions for archeological sites or for rare, threatened, or endangered species. Because of the recreational purposes of the park, human activity at archeological sites in known or potential habitat for rare, threatened, or endangered species would continue. Though considered to be small, some risk of unforeseen adverse impact would be unavoidable.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitments of resources include destruction of nonrenewable resources such as historic fabric and archeological resources. Even with mitigating measures, it is possible that such losses could occur through adaptive use at Barnum Island, Washington Island, Crystal Cove, Wright Island, and Fishermans Home. The National Park Service would take no other actions that would constitute an irreversible commitment of resources. Irretrievable commitment of resources are uses of renewable resources in construction of new campgrounds, docks, trail and removal of existing docks and a breakwater. The funding and renewable resources used for these endeavors are lost for other activities.